seven percent as applied to people who had x-rays submitted. With respect to people who did not have -- who had no x-rays but also know -- they didn't state that they relied on x-rays. That they actually pathology as an example or a CT. Would they have fallen in the category of no x-rays but not relied upon x-rays?

MR. FINCH: Objection. Lack of foundation. He's asking this witness to testify what Dr. Florence did.

MR. BERNICK: Well, I'll ask him to assume that that's exactly what Dr. Florence did.

Q I want you to assume, Dr. Weill, that Dr. Florence not only applied the seven percent to people who had submitted x-rays but also let pass through his filter people who did not have x-rays but had not said that they were relying on x-rays. I want you to assume that seven percent of those also were allowed in. If that approach had been taken, would that have provided room in the estimate for people who relied upon pathology or other techology?

MR. FINCH: Objection. Lack of foundation. This isn't -- he's offering -- he's asking him to opine on what people should be included or not included in the estimate not on what this witness did.

MR. BERNICK: Well, I'll put it more precisely.

Q Would it have been appropriate if we wanted to capture company -- Grace wanted to capture people who relied upon

pathology or other technology that is not x-rays and did not say that they're relying on x-rays -- would using seven percent across the board have been an appropriate way, from your point of view as a doctor, to let those people pass through the filter?

A Yes, I think it would --

MR. FINCH: Objection. Lack of foundation. Argumentative. He is asking this witness to opine on what people may or may not use to prove their claims, whether it's pathology or not. He's also asking this witness to basically walk through a hypothetical that he had nothing to do with.

MR. BERNICK: No, this doctor is being asked -- he is asked whether there are other technologies that are available. He said that there were. I'm now asking if we want to have people who do have evidence from pathology or from CTs -- if we want them still to qualify, whether it would be appropriate to have a -- them pass through in the same way as people who would've qualified with a radiograph. That's all that I'm asking.

MR. FINCH: Objection. Lack of expertise to answer that question.

THE COURT: I think that's the problem. I'm not certain where this witness' qualifications come in that estimation field.

MR. BERNICK: Okay. I'm not asking him to sign off

on the seven percent. I'm asking whether it would be appropriate if we wanted from a medical point of view to have people pass a medical screening if they had appropriate pathology evidence or an appropriate alternative technology like CT, would it have been appropriate to make provisions for them to pass through the screen if we wanted the screen to be medically sound.

THE COURT: Yes, but you're asking him specifically about the seven percent --

MR. BERNICK: Not -- forget --

THE COURT: -- and I think that's the issue.

MR. BERNICK: Forget the seven percent.

THE COURT: Then restate the question.

MR. BERNICK: Yeah, I'll restate the question.

BY MR. BERNICK:

Q Would it have been appropriate if we wanted to have the screen be medically sound to make room in the screen for people who had other evidence in the form of either (a) pathology or (b) an appropriate CT scan?

A Yes.

MR. BERNICK: That's my only real question, Your Honor.

(Pause)

Q If Dr. Florence's estimate incorporated the seven percent number from Dr. Henry's work and applied that to people who had

submitted x-rays, and if he also made a provision for people who had evidence through pathology or through CT, would that approach be consistent or inconsistent with your own view of what constitutes medically reliable evidence of asbestos relation for lung cancer?

MR. FINCH: Objection. Lack of expertise. Lack of foundation. Misstates what Dr. Florence actually did.

MR. BERNICK: Well, there -- first of all, there can be no expertise, because we qualified him to be expert in precisely this area. He's already testified for an hour in this area. All we're doing is creating a nexus between what he has testified to and what I'm asking him to assume is Dr. Florence's approach.

THE COURT: Well, you said if Dr. Florence incorporated the seven percent estimate from the x-rays --

MR. BERNICK: Right.

THE COURT: -- and also made provision for people who had evidence of pathology or CT scans but not necessarily the seven percent, as I understand, is that consistent with this witness' view of what's medically reliable evidence of lung cancer?

MR. BERNICK: What's medically reliable evidence of the link between --

THE COURT: Oh, the link.

MR. BERNICK: -- lung cancer and asbestos exposure.

THE COURT: I'm sorry. And what's the -- and the objection is that this witness isn't qualified to answer that question?

MR. FINCH: No, the objection is that it's -- it misstates what Dr. Florence did, and he has a lack of foundation to offer any opinions about whether what Dr. Florence did is medically appropriate.

MR. BERNICK: That is an entirely frivolous objection. Every day of the week you have testimony that's elicited from an expert on the assumption of another expert coming in and establishing something. That's exactly what I'm doing.

THE COURT: I -- that objection is overruled. I think this witness is qualified to offer that opinion.

BY MR. BERNICK:

Q Consistent or inconsistent?

A Consistent.

Q Thank you. Let's talk about other cancer. Have you looked to see whether there is -- hang on for half a second.

MR. BERNICK: I'm sorry, Your Honor.

(Pause)

MR. BERNICK: In the interest of time, I can move on to the last topic, Your Honor.

Q Let's talk a little bit about the diagnostic criteria for asbestosis. I think you testified previously, Dr. Weill, that

there are criteria, and they're set out as recommendations by the American Thoracic Society?

A Yes, I did.

Q Okay. I want to show you demonstrative GG-2151 and ask you whether these are the elements that are either recommended or recognized by the American Thoracic Society as important to a differential diagnosis of non-malignant disease from asbestos.

A This is a fair depiction of that.

Q Okay, so we have -- and again in the interest of time, those that are recommended by the ATS include exposure history and imaging, those that are recognized as having importance, or physical exam, medical history and lung function tests?

A yes.

Q And then based upon that, the doctor is supposed to conduct a differential diagnosis?

A That's right.

Q I want to ask you now for your opinion, whether in order to perform a reliable diagnosis of asbestos-related illness of the lung, whether compliance with the ATS recommendations is required or not.

A I think it is required.

Q Okay. Exposure history, what qualifies as an exposure history under the ATS recommendations?

A ATS recommends that a complete and thorough exposure

history is obtained.
Q Okay.
A It doesn't specify exactly how that's done, but it clearly states that it should be done.
Q I want to show you GG-2152 and ask whether this is an excerpt of the language that the ATS document uses in talking about the exposure history?
A It is.
Q Okay. That refers to, "It's to be obtained, whatever possible, directly from the patient that defines duration, intensity, time of onset, setting of exposure experienced by the patient. Occupational title is not enough as the names of many occupations and trades are uninformative." Is that what it says?
A Yes.
Q I want to come back to that one in a minute. Let me ask about lung function. Are there standardized methodologies for determining lung function?
A There are.
MR. BERNICK: And at this point, Your Honor, we would show the witness Exhibits GX-0322, 0323, and 0135, and they're in the binders, Your Honor.
Q And let me ask you, Dr. Weill, are those exhibits -- do they comprise the standards determining how pulmonary function testing should be performed?

A Yes.

MR. BERNICK: We offer them.

THE COURT: Any objection?

MR. FINCH: No objection, Your Honor.

THE COURT: They're admitted.

Q Dr. Weill, did you perform a study in connection with this case of pulmonary function results that were submitted by claimants in connection with the PIQ process?

A Yes, I did.

Q I want to show you Exhibit GG-2153. Does this demonstrative go through the stages of the analysis that you did?

A Yes, it does.

MR. FINCH: Objection. Relevance. I object to the relevance of any testimony or analysis of the pulmonary function tests submitted in response to the personal injury questionnaire for the two grounds I stated previously.

THE COURT: All right. Overruled.

Q Okay. In your own words could you just tell us basically what you did in order to perform your study regarding PFTs?

A Sure. Our first purpose was to determine the reliability of the sample of PFTs that were submitted by a variety of law firms in this bankruptcy matter.

Q Okay. Go ahead.

A As our methods, we determined or defined a random sample

of these PFTs in non-malignant claims only. We then developed a flow sheet that had as its basis a protocol to develop an assessment about whether or not patients were compliant with ATS criteria, and we reviewed each PFT to evaluate compliance in order to do this. And our results were, just to get to the conclusion, that none of the 150 PFTs that we analyzed met ATS requirements for the three standard lung function measurements.

Q I want to show you what we've marked as Exhibits GX-425, GX-426, and GX-427 and ask you whether these documents are summaries of the data that you obtained during the course of your lung function study.

A Yes, they are.

MR. BUCHBINDER: We offer them as summaries, Your Honor.

MR. FINCH: Objection. Relevance.

THE COURT: Overruled for the same reason. They'll be accepted only as summaries.

Q What did you find with respect to all the PFT studies or PFT measures that you reviewed during the course of your work from these different claimants?

A The none of the 150 PFTs met all three ATS criteria.

Q Is failure to -- does failure to meet the PFT criteria, does that bear upon the scientific reliability of the results?

A It does.

Q Tell us how it bears upon the scientific reliability of

the results?
A The performance of pulmonary function tests is highly technical, and in order for those tests to be repeatable and accurate, they must be performed properly, and to do that the ATS has developed these three documents that explain in a fair amount of detail about exactly how that should be done.
Q Okay. In your view, based on the results of your work, were any of the PFTs that you reviewed -- did any of them constitute reliable medical evidence?
A No.
Q Do you have illustrations of two of the problems -- some of the problems that were identified during the course of the PFT studies?
A I do.
Q Showing you Exhibit 2154 and 2155 -- well, actually, let's go through 2154 and 2155. What is reflected on 2154 as an illustrative?
A And again these are just examples. And so what this example shows is the failure on spirometric analysis to meet ATS criteria, and what the failure is is that during the patient's effort -- during the spirometric effort, which in this case is inspiratory and expiratory, the patient coughed, and so it disrupts the measurement while the patient's coughing.
Q Okay.

A And so to accept that spirogram is to accept information that is not valid.

Q If somebody wanted to, could they just redo the test?

A Sure.

Q Okay. Showing you 2166, what's the problem illustrated on 2155?

A So again this is -- as part of the spirometric evaluation you do what is called the volume over time measurement where time is on one axis, in this case the horizontal axis, and the volume a patient expires is on the vertical access. And what the ATS criteria designate is that there should be three efforts of at least six second duration when a patient blows out and a plateau should be reached of at least one second. Failure to meet that is a failure to meet one of the spirometric requirements that the ATS puts forth.

Q I want to show you Exhibits GX -- I apologize for the length of the number here. Your Honor it is GX7.1681352. And the second one is GX7.893695. So the first one was 1681352, second one is 8939695. Can I show you these and particularly the flagged pages that I've identified here? Are these the PIQ submissions for the two individuals whose PFTs you used for illustrative purposes and Exhibits 2155, GG-2155 and GG-2154?

A Yes, they are.

MR. BERNICK: We offer them, Your Honor.

MR. FINCH: Objection, relevance.

THE COURT: Overruled.

Q Why don't we come back to differential diagnosis, if we can show 2156 and I want to come back to the discussion that we had a few moments ago with the Court about the significance of exposure history? In differential diagnosis, could you tell us what it is that the doctor in general terms does in differential diagnosis?

A What a physician is doing when generating a differential diagnosis is considering all possible causes of whatever objective evidence the patient presents.

Q Okay.

A And then, I'm sorry, just to expand a little bit on that. Then there's a process that goes through the physician's mind where he or she is excluding and ruling in possibilities constantly.

Q Okay, now you have here on 2156 that when it comes to differential diagnosis we are talking conditions that are asbestos related, you say other conditions mimic the radiographic appearances of asbestosis and plural abnormalities and other diseases cause restrictive impairment. What are you getting at when you make reference to those points? What's the relevance of that?

A So even from an imaging and physiologic, that's the pulmonary function test standpoint, there are diseases that look exactly like the asbestos related diseases. And so if we

were to go back to the x-rays that I flashed up earlier looking at these asbestos related changes, one couldn't necessarily determine that those were asbestos related. If you took those changes just in isolation.

Q So showing you GG-2157, is this a list of some of the conditions that as you say mimic the radiographic appearances of asbestosis?

A Yes.

Q We see a whole variety of them there?

A Yes.

Q Turning to 2158, is this a similar list with respect to conditions that mimic the radiographic appearance of diffused plural thickening?

A Yes, it is.

Q And with respect to 2159, same thing with respect to plural plaques?

A Yes.

Q Would it or would it not be fair, Dr. Weil, to say that in all cases that is with respect to asbestosis, plural plaques and diffused plural thickening that there are a wide variety of other non-asbestos related conditions that can cause radiographs that could be confused or similar to the radiographs that are associated with those asbestos related conditions?

A That's a fair statement.

Q Okay. Now you've told us before that when it comes to differential diagnosis, one of the tools that you have at your disposal to determine whether a condition of the lung is asbestos related or not, that is it might be one of these other things, is to look for an exposure history. Do you recall that?

A Yes.

Q And again in order to bring us up to where we are in this examination I think you also told us that the quality of the exposure information obtained on patient history can be variable.

A That's right.

Q I want to show you GG-2160 and ask whether this would assist you in describing what some of the different kinds of exposure information can comprise?

A Yes. On the left side of the slide, I've labeled what is called anecdotal information. And that information comes from the patient himself and it varies from patient to patient. Some patients give a very detailed information, others don't. But it varies. Now that information has to be compared to the epidemiologic evidence that is available about exposure that's much more carefully performed.

That evidence is usually occupation specific and quantitative in nature. And so it provides a level of evidence that is very good. And from a physician's standpoint it

provides a background or framework to think about that individual patient's exposure.

Q Okay. Now let's focus on this for just a moment. If you have -- if you, as a doctor, have only anecdotal information and it's general. I saw some dust in the air, et cetera, et cetera, does that mean that a differential diagnosis is just impossible?

A It's very difficult under those circumstances.

Q Depending upon the level of detail associated with the anecdotal information might still become at some point, based on anecdotal information alone, to perform some kind of differential diagnosis?

A Yes. You just have to do the best you could.

Q I now want you to assume for purposes of my question that the information that is obtained from the patient is of sufficient specificity, that is as you showed in your prior slide under the ATS, you know, intensity, duration, et cetera, such that it can be matched up with the epidemiological studies. I want you to make that assumption. What does that do to the differential diagnosis?

A Well it raises your level of evidence about the exposure history and makes the evidence more firm that you have an adequate exposure history to increase the risk of developing asbestosis.

Q Okay. Now I then want to ask you whether -- in a sense,

the question I want to get you to is you know does it -- if you've got the exposure data from the claimant that is here is where I worked and how long I worked and you can fit it into the epidemiological science, is there any way that a differential diagnosis by an individual doctor somehow traps the learning of epidemiology?

A No, it doesn't.

Q And why is that?

A Because the epidemiology has been done on a larger group of patients. It's usually been done, if done properly, in a quantitative dose fashion and so that the level of evidence and the information you have about exposure is more precise.

MR. BERNICK: I pass the witness, Your Honor.

THE WITNESS: Your Honor, would it be possible to --

THE COURT: Certainly. We'll take a ten minute recess. I'm going to correct a note here that I need to correct so please take your recess.

(Recess)

THE COURT: Everyone back? Okay, Mr. Finch. Doctor, are you ready? Okay. Mr. Finch.

MR. FINCH: Thank you, Your Honor.

CROSS EXAMINATION

BY MR. FINCH:

Q Good morning, Dr. Weil. My name is Nathan Finch. I am counsel to the asbestos claimant's committee in the Grace

Bankruptcy.

A Good morning.

Q Is it true that you only have one publication related to asbestos?

A Yes.

Q And that was a letter to the editor in response to the 2004 American Thoracic Society statement on the diagnosis and initial management of asbestos related non-malignant diseases?

A That's right.

Q That was not a peer reviewed publication, correct?

A It was reviewed by their editorial board.

Q But it was not a statement -- it was not a study of asbestos related diseases, correct? It was a commentary on the 2004 ATS standards, right?

A That's right.

Q And you've never participated in any research regarding asbestos, correct?

A That's also correct.

Q And when you have testified in occupational lung cases it's been most commonly for defendants, correct?

A That's correct.

Q And somewhere between 20 to 25 percent of your income in the past two years has been from matters in which you've been working for W.R. Grace?

A That's correct also.

Q Now I have heard your testimony about differential diagnosis and the importance of taking individual case histories. Would you agree that the question of whether or not a particular exposure to an asbestos containing material has played a role in an individual's development of an asbestos related disease depends on the careful analysis of all the facts and circumstances relating to that particular individual?
A Yes.
Q That's true for every asbestos disease?
MR. BERNICK: Your Honor, I don't know who the individual is over here but unless that was -- maybe it was --
THE COURT: For my --
MR. BERNICK: Oh, it's to you. I apologize. Just saw a thumbs up and was wondering what was going on.
MR. FINCH: Let the record reflect there was no attempt to give a thumbs up to the witness. It is a technological issue as to which I'm probably incompetent to handle myself.
THE COURT: But for my edification, could you repeat the last question please? While that was going on, I too was a bit distracted.
Q Sure. Okay, Dr. Weil, would you agree that the question of whether or not a particular exposure to an asbestos containing material played a role in an individual's development of an asbestos related disease depends on a careful

analysis of all the facts and circumstances relating to that particular individual?
A Yes.
Q That's true for every asbestos disease?
A Yes.
Q That's true for the each exposure?
A Yes.
Q And that's true for each individual's medical situation?
A That's also true.
Q Now the letter to the ATS you referred to in response to one of my earlier questions, you were co-author of that letter with a Dr. Hans Weill, correct?
A That's right.
Q And Mr. Bernick on direct exam elicited that you are Dr. Hans Weill's son, correct?
A That's right.
Q And you were relying on some of his research for your opinions here, correct?
A I am.
Q Is it fair to say that you and he are in general agreement on issues relating to asbestos related medicine?
A As long as you make that specification, yes.
Q So you would agree with him that may asbestos disease patients are exposed to asbestos from a variety of sources?
MR. BERNICK: Objection. If there's going to be

purported impeachment of the witness using testimony from his father, that'd be a very interesting kind of impeachment. But I think that the fact that he agrees with his father's view or Dr. Weill, Sr.'s views does not provide an adequate foundation for then attempting to impeach him using Dr. Weill Sr.'s testimony.

MR. FINCH: I wasn't trying to impeach him, Your Honor. I was asking him does he agree that many asbestos disease patients are exposed to asbestos from a variety of sources.

MR. BERNICK: The problem is that is now counsel's testimony that that is Dr. Weill Sr.'s view and there is no foundation for that. If he wants to provide a copy and give the witness an opportunity to review it, he can then-- there can then be a record of the fact that Dr. Weill Sr. said that on examination. Otherwise, all this is is reading from some other person's statement and saying do you agree with Dr. Weill. There's no record of evidence that Dr. Weill said that.

MR. FINCH: Okay, may I approach the witness, Your Honor?

THE COURT: Yes.

Q Let me ask the question this way. Dr. Weill, leaving your father completely out of it, would you agree that many asbestos disease patients are exposed to asbestos from a variety of sources?

A I think some are and some aren't.
Q But many are, correct?
A I'm not really sure what you mean by many. I think just some are and some aren't.
Q Would you agree that it's not possible to do an epidemiological forecast just as the people who were exposed to one particular company's asbestos product?

MR. BERNICK: Objection. Lack of foundation. Also goes beyond the scope of his examination. He's now trying to turn this witness into an epidemiologist with respect to a different question that this witness never addressed. I'm sorry, this is an improper question. This goes outside the scope of the examination. It attempts to turn this witness into an expert on epidemiology concerning Grace specific exposure. He was never proffered for that purpose. It goes beyond the scope of direct and seeks to make him now the ACC's witness. This is totally improper.

THE COURT: I don't think the witness is qualified on epidemiology or forecasting. He was qualified with respect to certain issues concerning asbestos and lung diseases and I'm not sure how this fits into that, Mr. Finch. Do you want to lay a foundation for me?

MR. FINCH: Your Honor, he did testify about his use of epidemiological studies.

THE COURT: He did.

MR. FINCH: In making a differential diagnosis.
Q And would you agree with me, Dr. Weill, that the epidemiological studies that you looked to in making a differential diagnosis do not in general provide the names of the products to which the people were exposed?
A It does provide the type of exposure they had. Sometimes product specific, sometimes not.
Q Can you point to any source in the epidemiological literature that lists the names of the products to which the workers were exposed? The Selikoff studies don't name all the products that were exposed --
MR. BERNICK: That's two questions, which question?
Q Okay. You would agree with me that the Selikoff insulator studies don't list the names of the products, correct?
A They don't.
Q And the Hans Weill and Hughes study of the cement workers in New Orleans doesn't list all of the names of all of the various asbestos products those people were exposed to, correct?
A That's also correct.
Q And as you sit here today, isn't it the case that the vast majority of the epidemiological literature doesn't name the products? They might name the types of products, but they don't name the products which the workers were exposed to?
MR. BERNICK: I think this is outside scope. Let him

answer it and move on.

A By naming the product, you mean company name?

Q Yes.

A No, they do not.

Q And so would you agree with me for that reason it's not possible to do a product specific epidemiological assessment or projection of disease?

MR. BERNICK: That question is no different than the question he asked five minutes ago and has the same defect. He is now making this witness into an expert in epidemiology and seeking to elicit testimony in support of a proposition that was not placed at issue on the direct examination.

MR. FINCH: Your Honor, I stand by my question. Can I have a ruling?

THE COURT: Well this witness -- this is well outside the scope of this witness's testimony and I'm not sure, unless there is something in his report that I don't recall reading, Mr. Finch, so it may be there and I may have forgotten it. I don't recall that this witness offered an opinion on this type of area.

MR. FINCH: Okay. I'll move on, Your Honor. Thank you.

Q You have -- I believe I placed a copy of your first report on the ledge in front of you. Do you have that?

A Yes.

Q Dr. Weill. And for purposes of identification we've marked this as ACC-597. I don't intend to offer it Your Honor, but I do have some questions for the witness from it. Do you have your first report, ACC-597 in front of you, Dr. Weill?
A Yes.
Q Okay, could you turn to Page 19 of that report?
A Got it.
Q Okay. At the last paragraph, is it correct that you wrote while there is widespread agreement about the role of cigarette smoking and causing lung cancer, the relationship between asbestos exposures, asbestosis and lung cancer has been intensely debated both in the academic and legal arenas. The opinions regarding this relationship can be divided into three positions. One exposure to asbestos of any amount increases the lung cancer risk; two, exposure to asbestos of amounts sufficient to cause asbestosis are necessary to attribute lung cancer to exposure and three, asbestosis either rated graphically evident or president on histologic material is necessary to attribute lung cancer to asbestos exposure in an individual case. You wrote those words?
A Yes.
Q And so that's the debate in the medical literature, correct?
A Yes.
Q Could we go to the powerpoints? All right, one of the --

while we're waiting for that, one of the articles you cited in your report, and I believe it's Reference 84 in your report, is an article by Gustovson, correct?

A Yes.

Q Okay, now at Page 23 of your report, if you turn to Page 23 of your report, Dr. Weill?

A Yes.

Q You write, some studies have indicated there is a dose response relationship between asbestos exposure and lung cancer risk, even at low levels of exposure. And that's reference 84, right?

A Right.

Q That's the Gustovson study?

A right.

Q Okay. Could you turn in your notebook to Exhibit 331?

A I've got it.

Q All right. Exhibit 331 is the article by Per Gustovson that you cited for the proposition that some experts believe that there is a dose response relationship between asbestos exposure and lung cancer risk even at low levels of exposure?

A Yes.

Q And that was an article that was published in the American Journal of Epidemiology?

A Yes.

Q That's a peer reviewed medical journal?

A It is.
Q And what those researchers found in the middle of the abstract is that lung cancer risk increased almost linearly with cumulative dose of asbestos. The risk at a cumulative dose of four fiber years is 1.90, 95 percent confidence, interval 1.32 to 2.74. That's what they found, correct?
A Yes.
Q Now there is, if we go to the powerpoint, okay, so there is lung cancer caused by asbestos three views. One is what I'll call the Gustovson view that lung cancer plus asbestos exposure. Second view is -- you are familiar with the Helsinki criteria. You talked about them a little bit on direct, correct?
A Yes.
Q Those criteria were developed by a group of approximately 20 scientists who have expertise in asbestos related medical issues, correct?
A Yes.
Q One of them was Dr. John Parker?
A That's right.
Q He's one of Grace's experts here?
A As I understand it.
Q One of them is Dr. Victor Rodley who is one of the FCR's experts here?
A Yes.

Q And the authors of the Helsinki criteria had collectively between them published hundreds of papers in the peer view medical literature on asbestos related diseases, correct?
A That's correct.
Q In your book on Page 398 there is the summary title from the -- excuse me, Exhibit 398. Are you at Exhibit 398 Dr. Weill?
A Yes.
Q John, can we get back to Exhibit 398? That's the summary page and the summary article from what is commonly known as the Helsinki criteria, correct?
A Yes.
Q Okay. And could you turn to Page 314 of that article? And the authors of the Helsinki criteria concluded, did they not, that relative risk is roughly doubled for cohorts exposed to asbestos fibers at a cumulative exposure of 25 fiber years and with an equivalent occupational history at which level asbestosis may or may not be present or detectable? Heavy exposure in the absence of radiologically diagnosed asbestosis is sufficient to increase the risk of lung cancer. Cumulative exposures below 25 fiber years are also associated with an increased risk of lung cancer but to a less extent. That's the opinions of the authors of the Helsinki criteria, correct?
A That's correct.
Q Back to the slide show. Now the third point of view is

the view that your father had and that you have which is that in order to attribute lung cancer to asbestos exposure, you have to have lung cancer and asbestosis, correct?

A Yes.

Q So if you have a patient with lung cancer and asbestosis, you would attribute their lung cancer in whole or in part to asbestos exposure?

A That's right.

Q Okay. Now One way you confirm the presence of asbestosis or can, and this is the way your father did it in the Hughes Weill's study was by looking at x-rays of people, correct?

A That's right.

Q Another way to confirm the presence of asbestosis is to confirm it by pathology correct?

A Also correct.

THE COURT: Again, this is saying asbestos but you mean asbestosis, correct?

MR. FINCH: I mean asbestosis. There's a typo in Number 3, Your Honor. I apologize for that.

THE COURT: Okay.

MR. FINCH: I'm not going to offer these. These are for demonstrative purposes.

Q With that, you understood my question Dr. Weill? The two ways to confirm the presence of asbestosis. One is you can confirm the presence of asbestosis by looking at an x-ray,

correct?
A Correct.
Q And the second way is to do it by pathology, correct?
A That's correct.
Q Now on direct examination Mr. Bernick showed you a list of some studies. One of them is something called the Kipen study. Are you familiar with that?
A Yes.
Q All right. Would you agree with me that the Kipen study stands for the proposition that asbestosis can be present pathologically even if an x-ray is completely normal?
A Yes, I'd say that.
Q And if you go to your book, Exhibit 623 in your book?
A I've got it.
Q Okay Exhibit 623, ACC FCR 623, that's what is commonly known as the Kipen study that was published in the British Journal of Industrial Medicine?
A Yes.
Q And what those authors found in the abstract and what they found in their study is that these were 138 people where they had a tissue specimen that people have died from lung cancer, right?
A Yes.
Q And all of them had parenchymal fibrosis determined pathologically even though 18 percent of that group had no

radiologic -- they had no radiographic evidence of parenchymal fibrosis, right?

A That's right.

Q Okay. Can you go back to the powerpoint?

THE COURT: I'm sorry, would you say that again please.

Q What that means Dr. Weill is that --

THE COURT: No could you just restate the statement for me. I thought you said they died of it but they had no evidence of it. Is that what you said?

MR. FINCH: NO, they died of lung cancer.

Q That's correct, Dr. Weill?

A They did.

Q And they had pathology specimens on 138 of those people, that's right?

A Also right.

Q Okay. And for all 138 of those people when you looked at the pathology -- pathology involves taking a specimen of tissue and putting it under a microscope, right?

A Right.

Q When they looked at the pathology, all 138 of those people had asbestosis, right?

A Yes.

Q Would you agree with me that if asbestosis is detected by pathology, it's there? There's no dispute whether it's

asbestosis or not?
A There might be a pathological dispute but not as a clinician, a dispute with me.
Q If you heard -- have you used the statement that pathology is the gold standard for diagnosis asbestosis?
A Certainly heard that, yes.
Q Okay, and so what this found is that in 18 percent of those people they had normal chest x-rays but they in fact had asbestosis?
A Right.
Q Now back to the powerpoint. So I believe you just said pathology is the gold standard?
A Yes.
Q Okay. I want you to assume that a person has lung cancer and asbestosis that is confirmed by pathology but is not detectable on an x-ray. Make that assumption?
A I can.
Q You would attribute that person's lung cancer to the asbestos exposure at least in whole or in part, correct?
A That's correct.
Q To say that lung cancer in this person could not be caused by exposure to asbestos is medically wrong, isn't that right?
A That's right.
Q Now what is the American Thoracic Society? We talked about the document which was shown to you by Mr. Bernick which

is Grace Exhibit 274. What is the American Thoracic Society?
A It's a society of primarily chest physicians.
Q And the publish statements about such things as what criteria are necessary to run an appropriate lung function test for example?
A That's right.
Q And you relied on those in doing your analysis for PFTs?
A Right.
Q And they also published statements about what diagnostic criteria are necessary to diagnose asbestosis and other non-malignant diseases, correct?
A Yes.
Q The -- could you turn in your book to ACC FCR 389.
A I've got it.
Q That's the same -- Your Honor, for the purposes of the record that's the same document as Grace 274.
THE COURT: All right.
Q This is the American Thoracic Society statement regarding the diagnosis and initial management of non-malignant diseases related to asbestos, is that correct?
A Yes.
Q Okay. The -- back to the powerpoint. Would you agree with me that the American Thoracic Society statement allows for a diagnosis of asbestosis to be made with a 1/0 on the ILO scale, correct?

A In the proper exposure setting.
Q In the proper exposure setting. Adequate asbestos exposure, correct?
A Yes.
Q Appropriate latency?
A Yes.
Q And latency is usually stated as more than 10 years, correct?
A Some state it more than 10 years, some say more than 20.
Q Okay. And the latency period for asbestosis can be 40 or 50 years in some cases, correct?
A That's also correct.
Q And then you exclude other causes, right?
A Yes.
Q Could you turn in the -- leave the powerpoint up, we'll just go through the books. Could you turn in your book to Exhibit 389, the ATS statement to Page 696?
A I've got it.
Q Now one way to look for interstitial fibrosis in the meat of the lung, as you put it, is to look at an x-ray, correct?
A That's right.
Q Another way to do it is to look at high resolution CT scans, correct?
A That's correct.
Q HRCT. And would you agree with me that the American

Thoracic Society is determined that HRCT is much more sensitive in detection of asbestosis than plain chest radiographs?
A That's what they concluded.
Q Okay. So what that means is that if you look at an HRCT scan you are much more likely to see the changes, the interstitial changes that can be asbestosis than if you just look at an old x-ray, right?
A I don't agree with that. I think what you are more likely to see are changes and I would stop there.
Q Okay, so you disagree with the ATS about that?
A I disagree and I don't think that they were trying to imply that the HRCT scanning is absolutely specific for asbestosis. I agree with their statement regarding its sensitivity. It's a very sensitive clinical and refurbished tool.
Q Don't they also say at the top of Page 697 that HRCT is more specific than plain chest radiographs excluding conditions such as emphysema, thistle prominence, overlapping plural disease, bronchiostasis which may confound radiographic interpretation?
A I agree with their statement that it's more specific when excluding those diseases. What I don't agree with is that it is more specific in excluding other fibrodic lung disease.
Q So you differ with them on that, correct?
A No, I don't. I actually agree with that statement. But

those diseases that they list are not fibrodic lung diseases. Those are diseases that look entirely different on HRCT scanning. So where I differ is that HRCT scanning as a tool is unable to distinguish between the over 150 causes of fibrodic lung disease.

Q And you differ with the American Thoracic Study on that particular aspect?

A I don't. What they are saying is that it is very specific -- a very specific tool when you are talking about differentiating between obstructive lung diseases that they list here for instance and changes due to asbestosis, which are very fibrodic lung disease.

Q But would you agree with me that the American Thoracic Society allows clinicians to use HRCT to diagnose asbestosis?

A What I think the discussion really included in the statement is that HRCT scanning is a very sensitive tool for looking at lung disease. That's what I took away from it.

Q Okay, and -- but it is permissible to use an HRCT to diagnose asbestosis, correct?

MR. BERNICK: Wait. Permissible or consistent with the guidelines that are before the witness?

Q Would you agree with me that it's consistent with the guidelines for a clinician to use HRCT to diagnose asbestosis?

A It's in the guidelines.

Q So it is consistent?

A Yes.
Q Would you also agree that the American Thoracic Society does not require lung function impairment to diagnose asbestosis?
A That's correct.
Q Would you agree that the American Thoracic Society does not require more than one B reader to read an x-ray to diagnose asbestosis?
MR. BERNICK: Objection to the form of the question. That assumes that the ATS standard addresses the issue.
Q Do you agree with me that there is nothing in the ATS standard that says you need more than one B reader to read an x-ray to diagnose asbestosis?
A I don't remember their weighing in on that subject one way or the other.
Q And I believe you agree that the proposition that the American Thoracic Society allows doctors to use HRCT to detect asbestosis?
THE COURT: I'm sorry, would you repeat that?
Q Would you agree with me that the American Thoracic Society allows doctors to use HRCT to detect asbestosis?
A Sure.
Q Okay. Now, let's talk briefly about --
THE COURT: I'm sorry, Mr. Finch. May I ask a question about the HRCT please? Doctor, you just said that the

HRCT is a specific disease that helps you diagnose obstructive lung diseases, but that's not what asbestosis is.

THE WITNESS: Right.

MR. FINCH: So I'm sorry, did you have a specific question you wanted me to --

THE COURT: Yes, So the ATS allows you to use that function to diagnose a disease for which it is not intended to be used?

THE WITNESS: I'm sorry I didn't make that clear. What I was really trying to point out is that the -- there is two broad categories of lung disease both obstructive and restrictive. The HRCT being a very sensitive tool, meaning it's trying to include everybody that has possible lung disease fulfills that criteria. It's very sensitive. What -- while it allows us to distinguish between different categories of the disease, ones who are within one category of disease, i.e. fibrosis in our discussion, it breaks down. It's not able to give us enough specificity to allow us to distinguish between asbestosis and the other causes of fibrosis.

THE COURT: So it's not specific within the categories once you get to a category, restrictive versus obstructive.

THE WITNESS: That's correct.

THE COURT: Okay, thank you.

Q But it does allow clinicians to use HRCT to diagnosis

asbestosis, correct?
A I think it suggests it as an aid in that process, yes.
Q Okay. Were you aware that in Dr. Henry's study they ignored any HRCT images that came in with the sample of x-rays?
A I can't speak specifically to how they handled HRCT scanning in that study.
Q Let's talk about the health effects of asbestosis. One of the things that was found in your father's study of the cement workers is that people who had asbestosis were four times more likely to die of lung cancer than people who did not, is that correct?
A That's correct.
Q So that's one consequence if you are diagnosed with asbestosis, you are four times more likely to die of -- to get lung cancer, correct?
A Yes.
Q And most people who get lung cancer eventually die of it, right?
A That's right.
Q Would you also agree with me that asbestosis is a chronic condition? There is no way to cure it.
A That is also correct.
Q Do you also agree with me that if you have asbestosis, you are more susceptible to respiratory infections?
A I'm not aware of any studies that look at asbestosis

specifically although it's true of any chronic lung condition.
Q So any kind of chronic interstitial fibrosis can make you more susceptible to lung -- to infections?
A I would agree with that.
Q Okay. Would you agree that asbestosis causes a lung function decline in some people?
A Yes.
Q Would you agree with me that most people who get asbestosis don't die from it?
MR. BERNICK: Your Honor, I object to this line of questioning. I don't know what it has to do with the witness's direct examination.
THE COURT: He's an expert in -- he's been qualified as an expert in this area. I think this is clear that it's cross examination. It's overruled.
A I'm sorry. Could you repeat the question?
Q Would you agree that most people who contract asbestosis don't die from it?
A It depends. It really depends on the severity of the disease. So I can't give you a percentage in the broad category of asbestosis how many die and how many don't.
Q Would you agree that a person can have asbestosis without knowing it?
A Yes.
Q And on the pulmonary function test scores, one of those

measurements is force vital capacity?
A Right.
Q And that is expressed as a percentage of predicted value?
A That's also right.
Q So in order for someone to show up as abnormal on a pulmonary function test for force vital capacity, FVC, you have to be below 80 percent of predicted is one way they calculate that, correct?
A That's one way.
Q Another way to calculate it is below the lower limits of normal meaning two standard deviations from the mean, correct?
A Also correct.
Q Okay. And so --

MR. BERNICK: Your Honor, again this witness offered testimony about how to perform the pulmonary lung function test period. He was not offered for purposes of getting into any other aspects of lung function and how to deal with it. Now it may be that we could have him testify about that but that's not -- his nickel is part of his case, not my case.

THE COURT: But it's still cross examination and he's still an expert in this area.

MR. BERNICK: Sure, but what he can't go to cross examination -- it can't be cross examination and go to his credibility or use for impeachment unless he has said something in his direct that is contradictory. And he didn't address

this in direct.

THE COURT: Well he hasn't address this specifically in his direct. I'll give you a little leeway Mr. Finch, but you are going pretty far afield on this testimony.

MR. FINCH: I have two more questions about this topic and then I'll move to one other topic and that'll be it.

Q Would you agree with me in the measuring of lung function decline, let's say a person starts out at 110 percent of predicted. Okay, let's say that they are a world class runner. And their lung function declines from that to 85 percent of predicted on forced vital capacity. Understand that hypothetical?

A I do.

Q That person is still going to show up as normal on a lung function test?

MR. BERNICK: Objection. This is the same -- this is a hypothetical that has no tie to anything in particular. Again if he wants to do this he can do this as part of his case, not this case.

THE COURT: That's sustained.

MR. FINCH: All right, Your Honor. One other thing.

Q In terms of the American Thoracic Society Mr. Bernick asked you about the 1986 American Thoracic Society statement. Do you recall some questions about that?

A I do.

Q Could you turn in your book to an exhibit that's been marked ACC FCR 621?
A I've got it.
Q This was previously marked as Grace 280, Your Honor. This is the 1986 American Thoracic Society Statement?
A Yes, it is.
Q Could you turn on the elmo quickly? Do you remember Mr. Bernick showing you this list of -- zoom it out. Right there. Do you remember Mr. Bernick showed this list of conditions that mimic the radiographic appearance of asbestosis?
A Yes, I do.
Q Could you turn in the American Thoracic Society 1986 guidelines on Page 367?
A I've got it.
Q The last paragraph above the summary. It's Exhibit 621.
A Yes.
Q The last paragraph above the summary the American Thoracic Society writes there are diseases unrelated to asbestos exposure but with similar symptoms. These may occur in some persons with asbestos exposure. However, given a clear history of exposure to asbestos, a diffuse interstitial fibrosis can be assumed to be due to the asbestos as other forms of interstitial fibrosis are relatively uncommon. Is that the ATS's views?
A Yes.

Q And they haven't changed that view?
A I don't think so, no.
MR. FITCH: Your Honor, I pass the witness. Thank you, Dr. Weill.
THE WITNESS: Thank you.
THE COURT: Mr. Mullady.
MR. MULLADY: Thank you, Your Honor.
CROSS EXAMINATION
BY MR. MULLADY:
Q Good afternoon, Dr. Weill.
A Good afternoon.
Q Is the elmo still up? Thank you very much. On direct examination, you discussed the Hughes Weill study on asbestos as a precursor of asbestos related lung cancer. Is that correct?
A Yes.
Q We're showing the article on the elmo at this time, correct?
A Yes.
THE COURT: I'm sorry. What's the exhibit Mr. Mullady?
MR. MULLADY: This is GX-590.
THE COURT: Thank you.
Q And you told us, Doctor, that this article provides a biologically plausible hypothesis linking lung fibrosis and

cancer as common mediators, correct?
A Actually this article provided epidemiologic evidence. Not so much biologic plausibility.
Q Understood.
MR. BERNICK: If you could get a little close to the mic, it would be easier for us to hear.
A Sorry, I was mentioning that this article and my testimony about it provided epidemiologic evidence regarding the attribution question not so much the biologic plausibility issue.
Q Understood. You showed us this slide illustrating your hypothesis, GX-2130. Do you recall this?
A Yes.
Q And the theory is essentially that asbestos is a lung carcinogen because of its ability to cause lung fibrosis, right?
A Yes, in part, yes.
Q And that theory is actually discussed in the Hughes Weill article toward the end of the paper. Do you recall that?
A Yes.
Q The study authors had this to say about the theory. The current study is the latest in emerging body of evidence supporting the view that asbestos is a lung carcinogen because of its ability to cause lung fibrosis. Nevertheless, further results and support of these findings is necessary before a

firm conclusion concerning such a mechanism can be reached. Did I read that correctly?

A You did.

Q So it's only a hypothesis. Further study is needed, correct?

MR. BERNICK: Objection. What is a hypothesis? Objection to the form of the question. I'm not sure everybody understands or not. What is the reference about what is the hypothesis?

Q I'm referring, Doctor, to the hypothesis that is discussed in the article as opposed to your biologically plausible hypothesis.

MR. BERNICK: Again, I would then object. He's directed the witness to a particular paragraph dealing with a particular feature that is being discussed in that article, not the article as a whole. If the reference is to the what is discussed in that paragraph, I understand the question.

THE COURT: Restate the question, Mr. Mullady, specific as to what the hypothesis is you are referring to please.

Q Doctor, let's just take a step back. You would agree that the study authors here characterize their work as the latest in an emerging body of evidence supporting the view that asbestos is a lung carcinogen because of its ability to cause lung fibrosis?

A I don't think the -- I don't think the authors were suggesting a biologic explanation for their findings.
Q That wasn't my question.
A I'm not sure what it is then.
Q I'm simply asking you if the Hughes Weill authors stated in their paper that their study which they refer to as the current study was at that time the latest in an emerging body of evidence supporting the view that asbestos is a lung carcinogen because of its ability to cause lung fibrosis?
A Yes.
Q And they go on to say nevertheless further results in support of these findings are necessary before a firm conclusion concerning such a mechanism can be reached, correct?
A That's what they conclude.
Q Right. So the mechanism that they are hypothesizing in this article, you would agree that they were saying that that is a hypothesis and that further study is needed to confirm it?
A That's what they are saying, but remember this is over 15 years ago that this article was published. So there's been more recent work on the molecular aspects of this question.
Q But it is still fair to say, isn't it Doctor, that to date the medical and scientific community has not reached a firm conclusion concerning the hypothesized mechanism?
A The hypothesized mechanism?
Q Correct.

A I think what can be said is that since 1991 there's been additional evidence and additional research that's proved informative. Now to say that it is completely worked out and perfectly understood would be an overstatement.

Q You testified that it's your opinion that you can't have asbestos related lung cancer in the absence of asbestosis, correct? We talked about that?

A Yes.

Q In other words, you believed asbestos exposure alone does not cause lung cancer, correct?

A Yes.

Q But asbestos exposure alone can certainly cause asbestosis. You don't disagree with that?

A No, I do not.

Q And asbestosis can cause lung cancer, correct?

A Yes.

Q And putting on the elmo here a slide that you used in your direct. This is 2130, GX-2130.

THE COURT: I think it's 2139.

MR. MULLADY: Oh, I'm sorry.

Q 2139, 39. And here you are indicating that as between asbestosis and lung cancer there is a direct connection and you put the word yes here for that reason, correct?

A Yes.

Q But we could also draw an arrow from asbestosis exposure

alone to asbestos -- excuse me, I'll restart this question again. We could also draw a line from asbestos exposure alone to asbestosis and we could put yes next to that as well, couldn't we?

A You could put yes. But you would also have to have a pathway of course that says no. Because not everybody that is asbestos exposed is going to develop asbestosis.

Q But with that caveat you would be comfortable making that connection and using the word yes?

A In that very narrow sense, yes.

Q I want to ask you some questions about your testimony on the taking of an exposure history. I think you told us in your report that the proper taking of a careful exposure history is vital when diagnosing an asbestos related condition, correct?

A Yes.

Q Can we have 597 please? I'm having your expert report pulled up from October of 2006 where you discussed the history that a clinician should take from a person presenting with a possible asbestos related disease. Do you recall that in your report?

A Yes.

Q Okay, we have it on the screen. At Page 52, excuse me, yes 52 we can go there under exposure history. You told us that the history should not simply contain job titles and the company name of where one worked but rather comprehensive

information about the chronology of workplace exposures, frequency of exposures, type of respiratory protection used and proximity to others using asbestos products in the work environment, correct?

A That's correct.

Q Can we have 407 please? This is the W.R. Grace asbestos personal injury questionnaire that was given to claimants in this case, Doctor. I just want to refer you to Part 3 on Page 9 of this form which is where the claimants were asked to provide evidence of their direct exposure to Grace asbestos containing products. It's a little bit small. I hope you can read it.

A I'm sorry, where am I looking?

Q Top of this Page 9, Part 3, direct exposure to Grace containing asbestos -- Grace asbestos containing products. Do you see that?

A Yes.

Q And we see here that the Grace claimants were asked to provide information in the nature of exposure column on the far right of the chart and we're going to blow this up a little bit so you can see it. It's a little dark but I think you can make out the words nature of exposure. Do you see that?

A I do.

Q They were asked, if we can go back up to the top on the instructions, they were asked to indicate the letters

corresponding to whether the claimant was in "any of the following" during his exposure and the choices are listed in Paragraphs A through E. Do you see that?

A Yes.

Q Now --

MR. BERNICK: Your Honor, this does go beyond the scope of the direct examination and all I can say is the door is now open to the witness testifying about the -- about what actually happened in filling out these forms. I'm happy to do that but this goes beyond the scope. I feel obliged to say this goes beyond the scope of direct examination and opens the door to another area of inquiry that I intend to pursue.

MR. MULLADY: I think Mr. Bernick is a little bit ahead of himself. I think when he sees what I'm doing with this he might not have this concern.

THE COURT: All right.

Q Directing your attention to Paragraph, I think that's E, a worker in a space -- a worker in a space where Grace asbestos containing products were being installed, mixed, removed, or cut by others. Do you see that?

A Yes.

Q Now Doctor, given that one of the elements of an appropriate history, exposure history, in your view is to determine whether the worker was in, as you say, proximity to others using asbestos products in the work environment. Does

knowing that the worker was in a space where asbestos products were being used, without more, give you a basis as a clinician to conclude that the worker has an asbestos related disease?

MR. BERNICK: Objection. Is that the sole piece of information in the hypothetical, just that?

MR. MULLADY: Yes.

A As I understand, you are asking if I would consider that information as part of the whole?

Q No. I'm saying that if that's all you knew that the worker worked in a space where Grace asbestos products were being used by others, as a clinician would that be enough of an appropriate exposure history to determine whether that worker has an asbestos related disease?

A It really depends on the exposure. I don't think I can make a generic comment about that.

Q But would you agree that as a clinician trying to determine if this individual, this hypothetical individual, has an asbestos related disease you would want to know about the size of the space or just how closely the patient worked to asbestos? Wouldn't you?

MR. BERNICK: Objection to the form of the question and lacks foundation.

THE COURT: Overruled.

Q I think you answered it. Can you repeat your answer?

A I think that would be helpful information.

Q You agree that clinicians should quantitate -- qualitatively figure out if the patient you are talking to has enough exposure to increase the risk of disease because it's impossible to accurately quantify the individual's exposure. Is that correct?

MR. BERNICK: That question is compound number one. Number two, the second part of it exceeds at least based upon the proffer so far, the scope of his expertise.

THE COURT: Let me see if I got this correct because if I did, I have to sustain this objection. Do you want to restate the question?

MR. MULLADY: I'll withdraw the question and just refer the witness to his deposition testimony.

THE COURT: Okay.

Q Do you recall giving deposition in this case, Doctor?

A Yes, I do recall it.

MR. BERNICK: Your Honor, the fact that he's given a deposition is relevant if it's impeachment, the impeachment of a statement. What's the statement that's being impeached.

THE COURT: That's sustained too.

Q Do you agree, Doctor, that a clinician assessing whether a patient has an asbestos related condition should qualitatively determine if the patient has had enough exposure to asbestos to increase the risk of disease?

A To the extent that you are unable to do it quantitatively,

the answer is yes.
Q And often as a clinician you are unable to quantify the amount of asbestos and you must make that qualitative judgment, is that correct?
A In an individual case, that is true.
Q You showed us a demonstrative, this is 2160, if we can have the elmo back up please. This demonstrative discussed the components and methodology for generating a reliable diagnosis. Do you recall this?
A Yes.
Q And this is where you put into two categories different types of exposure evidence. Some anecdotal and those which would fall under the rubric of epidemiologic evidence, correct?
A Yes.
Q My question is with reference to the question on the PIQ about whether the worker is or was in a space, would it be fair to say that would be another type of anecdotal information that would go over here? I was in a space. Would you agree with that?
A I would certainly agree with that. What I'm unsure of is that is the only information you have because I'm not familiar with what studies are available regarding Grace exposure quantitatively in a space.
Q With that qualification, what I've written there that's the appropriate place for it. It's in the anecdotal category.

MR. BERNICK: Objection. First of all that doesn't even properly quote Category E. B, it takes it out of context of the other questions that were asked with respect to it. So to the extent that that question purports to refer to the questionnaire, it is misleading and it is incomplete.

THE COURT: Well the question proffered to the witness was not incomplete but the statement that was just added to the chart does not reflect what was on the PIQ. So to the extent that you want something added to the chart that is reflective of the PIQ right now I'll understand that to be the shorthand explanation of what is on the PIQ. But you are going to have to write out what was on the PIQ. If that is what you are attempting to do. The witness has said it's anecdotal except he doesn't know whether there are any quantitative studies to back up the data. So I think the record is clear.

MR. MULLADY: I don't think I need to rewrite it but let me just ask the witness.

Q You would consider it to be anecdotal if the worker said I was in a space where Grace asbestos containing products were being installed, mixed, removed or cut by others?

MR. BERNICK: And that is the only information that was provided?

MR. MULLADY: Correct.

A If that's the only thing a patient says, it's anecdotal.

Q Thank you.

MR. MULLADY: That's all I have for the witness. Thank you, Your Honor.

THE COURT: All right. Mr. Bernick, are you going to have redirect?

MR. BERNICK: I will.

THE COURT: How long?

MR. BERNICK: Probably around 15, 20 minutes max.

THE COURT: Why don't you do it and then we'll take a lunch break?

MR. BERNICK: If I could ask it's just going to take time to get things together. I know it will go more quickly if we take a lunch break.

THE COURT: All right. We'll recess until 1:30

MR. BERNICK: Is there anybody else that has --

MR. FINCH: Your Honor, does the rule on witnesses apply in Delaware? I would ask that the witness not be allowed to consult.

THE COURT: Oh yes, Doctor, you are not allowed to consult with counsel concerning your testimony during the lunch recess. All right. We'll be in recess until 1:30.

(Lunch Break)

THE COURT: You are still under oath, Dr. Weill. Mr. Bernick.

REDIRECT EXAMINATION

BY MR. BERNICK:

Q If we could show TJ -- 2125. If we took a look at this fundamental slide that posed the issue that you framed for us, Dr. Weill, which is does asbestos exposure alone without asbestosis cause lung cancer. I want to deal with a couple of the studies that were discussed with you on cross examination to see how it is that they fit in. In fact what I might do is if I could switch over to the elmo a second and use a hard copy of the same document. So the question -- it should be on. Is there any reason why it's not? No it looks to be on but I don't get anything here. Nothing like rebooting. Rebooting solves all the problems in the world, right.

So where -- the two questions that you posed or the question that you posed was is asbestos exposure alone tied to lung cancer or must their be asbestosis or put differently, without asbestosis that is with asbestos exposure alone do you get lung cancer? Is that a correct statement of the question?

A That's correct.

Q Now you talked about two basic studies. There was the Selikoff study or the insulators. Where do I put the insulators if I want to ask the question what did the insulators tell me about?

A So on this slide, this would be Category 1 that there is only asbestos exposure alone.

Q For the insulators?

A For the insulators.

Q But then what about when you get to the insulators as updated by the Kipen work?
A If you then follow the Kipen work and get pathologic information as in Kipen you see that the asbestotics were at higher risk in that cohort for lung cancer.
Q Now once you know that from Kipen, where does the cohort belong? Does this cohort tell us about what happens for lung cancer with asbestos alone? Asbestos exposure alone or is this a cohort that tells us about workers who have asbestosis as well?
A Once you have Kipen it's asbestosis.
Q So we put the insulators over here. But through the insulators can you find out about asbestos exposure alone? That is now with the benefit of Kipen, is there any way to go back to the insulators and figure out if asbestos alone is enough to get you there?
A No. There's no way to figure that out.
Q Now let's talk about the Hughes Weill study. Where does the Hughes Weill study fit in?
A That would be in the category that shows an arrow between asbestosis and lung cancer.
Q Okay. And this is now the asbestos cement workers?
A Yes.
Q Okay. Does that same study though also give us information about asbestos exposure alone, that is without

asbestosis?
A It does.
Q And on the basis of the asbestos cement workers, is that what then leads you to answer the question here yes and the question that is asbestos alone no?
A Correct.
Q Now I want to ask you about a different study that was put to you on cross examination which is the Per Gustovson study. Are you familiar generally with this study?
A Yes.
Q And I've got a copy here in case you need to make reference to it. But in this study is there anywhere in this study that there is sufficient specificity in the data to enable us to answer the question of whether asbestosis is tied to lung cancer?
A No.
MR. FINCH: Objection leading.
Q You tell me if that study belongs number 2, number 1 or actually someplace else.
A No, it belongs in number 1. It's an asbestos expose cohort and that's the information you have in that study.
Q On the basis of that study though can you tell whether it's asbestos exposure alone or whether there is also asbestosis?
A No.

MR. FINCH: Objection, leading.

Q Now if we have -- if this is a situation where there is high asbestos exposure or just say asbestos exposure. In that case it's low. Asbestos exposure and asbestosis, both at the same time, but all that's being reported is the asbestos exposure. First of all, is that what's going on in that study?

MR. FINCH: Objection. Leading.

THE COURT: It is leading Mr. Bernick. You are going to have to --

MR. BERNICK: Well I'm just trying -- it's really foundational to another question.

Q I'll put it to you very simply. Tell us whether or not you can find out from that study whether or not the people in that study also had asbestosis?

A There's no information in that study on that point.

Q On the basis of that study, is it possible to test or to answer with specificity the question that you have posed here?

A No.

Q Is that study unique that way or is that also true of other studies?

A Also true of other studies.

Q Now Mr. Mullady made a little diagram. He said --

MR. MULLADY: Objection to little.

Q Okay, we'll blow it up real big. GC-2140 and he said well isn't it true that where you have asbestos exposure you have a

risk of asbestos? And you do this one here and you say well yeah, there are a certain number of people who have asbestos exposure, get asbestosis and a certain number of people with asbestosis on your theory get lung cancer. You said that's true.

Now does this idea that is because you can't get asbestosis without asbestos and because with asbestos you may get lung cancer, does that tell you the answer to the question at all about whether asbestos exposure alone and the absence of asbestosis contributes to or has associated with it a risk of lung cancer?

A No.

Q Tell us why not?

A Because remember as I pointed out in the response to that question there is another arrow that has to lead off into the no category. In other words those that were asbestos exposed but did not develop asbestosis. So there is a yes and a no leading from asbestos exposure alone.

Q Therefore in order to answer this question, this direct that is what about the people who have asbestos exposure as a group, do they have an increased risk of lung cancer, that is asbestos alone --

MR. FINCH: Objection leading.

MR. MULLADY: I didn't ask the question yet.

Q I said in order to answer the question, tell us what you

have to do?
A Without the presence or the absence of asbestosis and information on that you are not able to say.
Q Now turning back to 2142 I want to tee up this question. If we go back to the period of time when asbestosis the criteria for asbestosis were narrower in the group of people called true asbestotics were narrower, a narrower group of people. Was there or was there not in fact controversy based upon science as to whether having that asbestosis, that stricter asbestosis, was a prerequisite for getting lung cancer due to asbestos?
A There was some controversy on that point.
Q Now that the definition of asbestosis has been expanded to include as you've indicated anyone who demonstrates actual physical evidence of any impact on the lung per se, with that broad definition, tell me whether there is significant science that says only thing that is clear is a history of exposure. No objective evidence of impact on the lung and there is still a risk of lung cancer. Tell me is there a large body of sciences out there that says that?
MR. FINCH: Objection. Leading, compound.
THE COURT: It is Mr. Bernick.
Q In your own words, I want to frame the issue. Now that we're solely taking the people who cannot qualify for asbestos because they have no objective measurements of any effect on

the lung for asbestos. Focusing on those people, tell me in your own words the state of whether there is lots of science, little science that actually links those kinds of people to lung cancer.

MR. FINCH: Objection. Compound and leading.

MR. BERNICK: No.

THE COURT: It's not leading and it's not compound enough. This witness can answer the question.

A I think the reliable scientific evidence demonstrates that without the presence of asbestosis you cannot attribute lung cancer to asbestos exposure. So on the question of just the asbestos exposed patients without information either pathologic or radiographic, you can't say. You just can't determine whether or not you have an asbestos contributable lung cancer.

Q Okay. Are you aware of any kind of consensus statement that says no, there really is science that robustly demonstrates that relationship? Have you heard of any such consensus statement?

MR. FINCH: Objection, leading.

A No.

THE COURT: No, it's are you aware. That's not leading.

Q Has any such study been pointed out to you here today?

A No.

Q Let's talk about HRCT. HRCT I think you talked about as

being, and Mr. Finch I believe read to you some portions of the 2004 ATS statement with regard to the diagnosis of non-malignant disease. In the greater sensitivity, I would like to see in fact if I can dig that out at some point. But tell me whether the -- today there is anything either an ATS recommendation or some other document that sets out the grading to follow in using an HRCT that runs parallel to the grading that you have for x-rays into the ILO?

A No, that's never been done.

Q Is that -- I just want to direct your attention -- turning to GX-0274 in evidence. I want to direct your attention to this language where it says a proposal zoom -- a proposal has been put forward for a classification system analogous to that of the ILO system for plain chest radiograms. But none has been widely adopted. Do you see that statement there in the more current ATS statement?

A Yes, I do.

Q Absence such a grading system, is there a way to use HRCT to do the kind of epidemiological study that was done of the cement workers?

A No, not in my opinion.

Q What about pathology? Is pathology something that was available to be used to do the kind of epidemiological analysis that was done of the asbestos cement workers?

A No, it wasn't available.

Q Based upon the currently available technology of the fact that there is now currently available technology for HRCT but with no classification system or pathology, does that in any way diminish the significance or reliability of the findings that were made in the asbestos cement study?

A No.

Q I want you to assume that there was a more sensitive technique that was available to do the work that was done in the asbestos cement study. You know, more sensitive, could pick up asbestos more readily and you could classify it and do everything that you wanted to rate. And that the result of that was that more asbestosis was found in that study than was picked up by the x-ray reads. Would that necessarily -- would that have had any necessary effect one way or another on the outcome of that study?

MR. FINCH: Objection. Leading.

A It likely would have had an effect --

MR. BERNICK: Well wait.

Q Would it have had an effect one way or another --

THE COURT: No, overruled.

A It likely would have had an effect but not in a predictable way.

Q And what do you mean by that?

A Well, anytime you employ a more sensitive test to include more people in the possibility of having disease, you're going

to change the dynamics of the study. So when doing that you can't really predict how the study is going to come out. You've changed diagnostic tools, particularly one that's much more sensitive, as in the case of HRCT, and you'll likely change results in some unpredictable way.

Q Well, but differently. If radiograms, or reading x-rays, is less precise, does that fact give a bias one way or another in the outcome of the Asbestos Networker study?

A No.

Q If -- for Dr. Henry's study he looked at the x-rays and weather -- which of the x-rays were found to comply with the standards and which not. In aid of that issue, would pathology -- using pathology had fit into his study?

A No.

Q Mr. Mullady asked you a bunch of questions about this particular language that appears as part of GX0590, which was not in evidence but was referred to. He said, "Do you see where it says, 'The current study is the latest in the emerging body of evidence supporting the view that asbestosis is a long carcinogen because of its ability to cause lung fibrosis; nevertheless, further results in support of these findings are necessary before a firm conclusion concerning such a mechanism can be found?'" Do you remember being asked a whole bunch of questions about that?

A Yes, I do.

Q Does that statement in some fashion diminish the analysis of data that was set forth in this study?
A No. As I mentioned, this study speaks to the epidemiology regarding causation. The mechanism, or the biologic factors taking place, is an entirely different question.
Q I also want to go on and say -- do you see where he goes on to say, "Finally, these data may provide further evidence to support the common practice of attributing lung cancer to exposure to asbestos only if asbestosis is also present. Otherwise, these tumors are, in most instances, due to cigarette smoking." Do you see that statement?
A Yes.
Q Where you have asbestos exposure alone, no asbestosis -- I'm now pointing to G12140 -- and you have smoking, so asbestos exposure alone and smoking and a case of lung cancer, tell me, you know, just how -- tell me the significance of the presence of smoking as an explanation for the lung cancer?
A It would be very significant.
Q How strong is that risk factor?
A Cigarette smoke is a very strong carcinogen, and even with say a 20 pack year cigarette smoking history, which would be considered I think a moderate smoking history, the risk of developing lung cancer is 20 fold versus those who don't smoke. So it's a very strong carcinogen.
Q You were asked a question about whether the ATS statement

made any requirement about having multiple B-reads. Do you recall that?

A Yes, I do.

Q Is there or is there not an independent requirement that bears upon that question?

A I'm not sure I understand the question.

Q Is there a separate standard, a separate and independent standard, that bears upon that question?

A Yes, the NIOSH.

Q And was that the basis of your testimony on direct?

A Yes.

Q Okay. Finally, with regard to the questions that were asked of you regarding exposure, I believe that Mr. Mullady elicited testimony from you that when it comes to doing a diagnosis, a careful analysis of all the facts that bear upon the individual who's being diagnosed, that a careful analysis is appropriate, and you agreed with him. Do you recall that?

A Yes.

Q Okay. Once you've done that careful analysis, that's once the data is all there, does all of the data that may be gathered carry equal weight?

A Not necessarily, no.

Q We showed -- or you showed the Court Exhibit 2160. What relevance, if any, did this document have in talking about once you've got the individual data what weight to give to different

parts of it?
A Well, I think what the epidemiologic studies allow us to do is develop a framework to evaluate the individual patient, and so the epidemiologic studies are important to develop that framework when used in combination with the anecdotal information.
Q Okay. And is all of the -- I mean -- I think Your Honor probably already understands well where this is going, so I'll skip over it, and it's probably somewhat unnecessary to get into this as well, but relating -- pertaining to Exhibit ACC/FCR407, which was the questionnaire -- remember that Mr. Mullady wanted to ask you a bunch of questions about it. I just want you to focus on this whole page. Only assume that this question is being asked, and he asks you, "Well, essentially is that kind of limited information?" And you agreed with him that it was. I now want you to look at the rest of page where you have all these other categories, and then for each job description you've got different job descriptions, products, basis for identification, dates and frequencies of exposure, occupation codes, industry codes, and then a further column that's marked there relating to the kind of exposure. I ask you the same question. Is this or is this not the kind of information that you would want to have in reaching an assessment about how important the exposure was?
A It is the kind of information you'd want.

Q I now further want you to assume that there's industrial hygiene data that on the basis of these answers enables an industrial hygienist to specify what the exposures are so that you can compare them to the epidemiological studies. With the benefit of all of that information, what relevance is that -- what relevance, if any, does that have to performing a proper differential diagnosis?

A It's very relevant.

MR. MULLADY: Objection, Your Honor. Objection. I think we're now outside the scope of the cross. I didn't ask him about industrial hygiene --

MR. BERNICK: Well, that's the whole point, is that you excluded that from the question.

THE COURT: It seems to me that this is fair with respect to the issue of what the impact of the anecdotal data compared to the epidemiological studies and the comparison of the two, which seems to be the thrust of both the direct and the redirect, so -- or the cross, pardon me -- so I'm going to let a little leeway, but --

MR. BERNICK: It's the last --

THE COURT: -- not too far, Mr. Bernick.

MR. BERNICK: Yes. Because I understand that Your Honor probably well gets the drift of this. I just want to make sure that the record is clear.

Q Where all of that is present, that is you have -- you have

the ability to know what the person did, what their jobs are and the industrial hygiene data that is associated with that, at that point is it satisfactory to simply aim for a qualitative assessment, or do you want to aim for more?

A You want to aim higher.

Q Okay. And if you can aim higher, what impact does that have on the ability to conduct a meaningful differential diagnosis, if any?

A It just raises your certainty about the type of asbestos exposure the worker got.

MR. BERNICK: I have nothing further, Your Honor.

MR. FINCH: Brief recross, Your Honor?

THE COURT: Yes, sir.

RECROSS EXAMINATION

BY MR. FINCH:

Q Dr. Weill, do you still have the book that I gave you up there?

A Yeah.

Q Okay. Could you turn to the Hughes-Weill study?

A Could you give me the number again?

Q It's Exhibit Number 628.

A I've got it.

Q And in that study the dividing point for asbestosis was 1/0, correct?

A That's right.

Q So even though the ATS standard hadn't changed from 1/1 to 1/0, your father considered 1/0 sufficient to be asbestosis, correct?
A Yes.
Q All right. The Gustavsson study, that's Exhibit 331, Mr. Bernick asked you some questions about that study on direct. Do you recall that?
A Yes.
Q Could you turn to Page Ten Twenty of that study? It is Exhibit Number ACC-331.
MR. FINCH: It's not in evidence, Your Honor. I just used it with him on cross examination --
THE COURT: Okay.
MR. FINCH: -- and Mr. Bernick had some questions about this on redirect.
THE COURT: Yes, sir.
Q Do you have Page Ten Twenty in front of you --
A Yes.
Q -- Dr. Weill?
A Yes.
Q And that shows estimates of exposure for these various people --
A Yes.
Q -- in the top column and the relative risk for nonsmokers and then -- compared to various people who smoke?

A Yes.
Q See that?
A I do.
Q And what this shows is that for people with fiber exposures of between 1 and 2.49 fiber years, their relative risk -- even if they were never smokers, their relative risk of getting lung cancer was 2.7, correct?
MR. BERNICK: I object. Your question assumes that there was even more than one person who fit that category.
THE WITNESS: I think --
MR. BERNICK: Do you know that that's so?
A That's certainly what the table shows, and I can comment further, though, regarding the confidence interval.
Q The current smokers, or people who were exposed to asbestos at greater than two and a half fiber years, shows 40 times the risk of -- excuse me -- confidence intervals of 4.6 to 40 as compared to 6.7 and 16.6 for unexposed people?
A You're going to have to try again.
Q Yes, sure. In the current smokers, you've got people who smoked from one to ten cigarettes a day. People who were never exposed to asbestos, the relative risk of dying is 10.5. For people who smoked greater than two and a half -- excuse me -- people who had more than two and a half fiber years of exposure, the relative risk was 13.5, right?
A I see that.

Q Okay. Would you agree with me that all of the exposures shown on here, zero to .99, one to 2.49 and 2.5 are levels of exposure unlikely to result in asbestosis?

MR. BERNICK: Well, number one, the question is falsely framed because it's not 2.5 --

MR. FINCH: Your Honor, it's -- this is --

MR. BERNICK: I'm sorry --

MR. FINCH: -- seeking objection that is improper under the rules.

MR. BERNICK: Okay. Object to form. It misreads the document. If you're going to have a witness answer a question concerning the document, it should be properly read. 2.5 is greater than or equal to, it's not --

THE COURT: The objection is that the statement does not fairly -- the question does not fairly reflect the information on the document, and that is sustained.

Q Okay. Would you agree with me that for fiber exposures of one to 2.49, that's unlikely to result in asbestosis?

MR. BERNICK: Objection; lack of foundation.

A If the --

THE COURT: Wait. Wait, doctor.

THE WITNESS: I'm sorry.

THE COURT: This chart does not appear to relate to asbestosis. It's relative risk of lung cancer, not specifically asbestosis.

MR. FINCH: That's my point, Your Honor. My point is that these people have an increased risk of lung cancer even at levels of exposure far less than what one would expect to contract asbestos.

MR. BERNICK: You're --

THE COURT: Well, I don't know. The doctor was about to explain some issues he has with respect to the confidence intervals in looking at this chart. Perhaps if you want him to explain that answer, then maybe we can get to this question. Otherwise, I'm not sure that that fairly reflects this issue.

A First of all, the confidence intervals, so you mentioned in the never smoking group the exposure categories that included one as part of the confidence interval, and so from a statistician's point of view that means that the increase in relative risk may be or may not be due to chance. So that's one statistical point that I have to make. Secondly, you had questions regarding the likelihood of those exposure levels causing asbestos or not, and that would depend a lot on fiber type.

Q Okay. Well, you -- so you would agree with me the level of exposure necessary to cause asbestosis depends on the individual person's circumstances?

MR. BERNICK: Your Honor, at this point, the witness is now being made into a witness on what the epidemiology is of asbestosis, and that's being done in order to derive an

inference from this article. Fair -- if he wants to do it, fine, but then I'm going to have a short unfortunately re-redirect --

MR. FINCH: No, that --

MR. BERNICK: -- based upon this article because that goes beyond the scope of anything that I've asked him.

MR. FINCH: All right. I'll --

THE COURT: It does.

MR. FINCH: I'll withdraw the question, Your Honor.

THE COURT: This is recross, so you're limited to what was asked on redirect, and this was not.

MR. FINCH: Okay. Fine, Your Honor.

Q One final question on the Hughes-Weill study, pathology was not available for those workers, but pathology was a tool that was available to doctors in the 1990s to diagnose asbestosis, correct?

A That's correct.

MR. FINCH: Okay. Thank you.

MR. MULLADY: I have nothing.

THE COURT: Mr. Mullady?

MR. MULLADY: No, thank you.

THE COURT: Mr. Bernick?

MR. BERNICK: No, thank you.

THE COURT: Doctor, you're excused. Thank you.

MR. FINCH: Your Honor, my partner Mr. Bailor is

going to handle the cross examination of this witness.

UNIDENTIFIED ATTORNEY: Here, you can just take my seat. Do you need to -- I'm going to bounce down the line here.

MR. McMILLAN: Good afternoon, Your Honor. Scott McMillan for W. R. Grace. We would like to call our next witness, Dr. Daniel Henry.

THE COURT: Dr. Henry?

THE CLERK: Stand and raise your right hand.

DANIEL HENRY, DEBTORS' WITNESS, SWORN

VOIR DIRE EXAMINATION

BY MR. McMILLAN:

Q Good afternoon, Dr. Henry. Could you please state your full name for the record?

A Daniel Henry.

Q What is your occupation, Dr. Henry?

A I'm a chest radiologist.

Q And in general terms, what have you been asked to testify about here today?

A A study that I performed on a group of claimants that espoused that they apparently suffered from a malignancy and had radiographic evidence of asbestos exposure.

MR. BAILOR: Your Honor, we would object on relevancy grounds.

MR. McMILLAN: Your Honor, the study that Dr. Henry

did was based upon two orders that this Court entered in early 2007 ordering the claimants to turn over radiographic evidence they had in support of their lung cancer and other cancer claims explicitly for the purpose of allowing us to conduct an analysis of that. Indeed, if these are claimants who state that they are relying upon this radiographic evidence in support of their claim of lung or other cancer, it is entirely within our purview to have our experts evaluate that radiographic evidence and to present testimony to the Court on the validity of that evidence.

THE COURT: Well, I'm going to overrule the objection for now. I'm going to take all of this evidence under advisement. I am going to see -- as I indicated earlier in the case, although I'm not sure I ever made rulings on the record, that I am taking all expert opinions under advisement in the case and I will rule on Daubert issues at the conclusion, and so this witness, as all other witnesses, will be accepted -- the testimony will be accepted in that view. Go ahead.

MR. McMILLAN: Thank you.

Q Dr. Henry, have you prepared any graphics in anticipation of testifying today?

A Yes, I have.

Q Would it assist you in your presentation today to use those graphics?

A Yes, sir.

MR. BAILOR: Counsel, may I have a copy of the graphics?

MR. McMILLAN: Oh, I'm sorry. I meant to give those out.

UNIDENTIFIED ATTORNEY: Thanks very much.

MR. McMILLAN: Could I have GG-2066, please?

Q Dr. Henry, could you please tell us about your education and medical training briefly?

A I'm a graduate of the St. Louis University School of Medicine. After an internship, I completed my training in radiology at the Medical College of Virginia, or Virginia Commonwealth University, in 1975.

Q Could you pull the microphone --

MR. BAILOR: Excuse me. Could we have the doctor pull the microphone a little closer? I'm having a little trouble hearing him.

THE COURT: We'll try. Did you -- do you need that repeated? He was explaining his educational background.

MR. BAILOR: I don't think we need that repeated.

THE COURT: All right. Thank you.

Q Doctor, after you completed your residency, where did you go to work?

A I was -- joined the United States Air Force where I was accorded the rank of major and assigned to Wilford Hall Medical Center as a teaching instructor to teach radiology residents in

the U.S. Air Force.

MR. McMILLAN: Could we have the next slide, please, which is GG-2067. Dr. Henry, after you left the Air Force, where did you go to work?

A I assumed a position at the -- in the department of radiology at the Medical College of Virginia.

Q And is that the institution at which you currently work today?

A Yes, sir.

Q What is your current position at that institution?

A I'm section chief of the section of thoracic imaging.

Q And do you also hold any faculty appointments?

A I'm associate professor of radiology and medicine in the School of Medicine at VCU.

Q Have you been employed at the VCU School of Medicine continually since about 1977 till the present?

A Yes, sir.

Q Could you please tell us which professional organizations you are a member of?

A I'm a member of the Radiological Society of North America, the Society of Thoracic Radiology, and I'm a member and fellow in the American College of Radiology.

Q What is the American College of Radiology?

A It's an organization that's devoted to the education and other benefits of its members in the process of radiology.

Q Now, I see that you say that you are a member and fellow. What does it take to become a fellow of the American College of Radiology?

A Well, it's somewhat of a secret process, but you're usually elected to this post following some extraordinary contribution to the welfare or benefit of the organization.

Q Have you served on any committees or done other work for the benefit of the American College of Radiology?

A Yes. I was invited to join the American College of Radiology Committee on Pneumoconiosis in 1990, based upon my activities as a B-reader and my teaching abilities.

MR. McMILLAN: Could we turn to the next slide, GG-2068, please? I see you've got it up there.

Q You used a term a moment ago which is "pneumoconiosis." Could you please explain what pneumoconiosis is?

A Pneumoconiosis is a medical term that is used to describe the diseases related to the inhalation of organic or inorganic dust.

Q And is asbestos one of the dusts that can cause pneumoconioses?

A Yes, sir.

Q I believe a moment ago you said that you were on a committee or a task force that related to pneumoconiosis for the ACR. What did you do on that committee?

A I was an instructor. The American College of Radiology

provides courses for those wishing to become certified as a B-reader or re-certified as a B-reader.

Q And have you done any other work besides serving on that committee for the ACR?

A Well, I -- currently I'm the chairman of that committee, but I also advise NIOSH on their teaching efforts as it relates to pneumoconiosis and other activities that relate to their home-study syllabus, the exams themselves and so forth.

Q What is NIOSH?

A NIOSH is the National Institute of Occupational Safety and Health.

Q And what role do they play with regard to B-readers and the B-reader course that you are teaching?

A They currently administer the examination and they run surveillance programs around the country for patients who perhaps might be exposed and might have pneumoconiosis.

Q Do you participate in any of those surveillance programs?

A Yes, sir, I do.

Q What do you do?

A I interpret films for them. I also review their teaching materials. Currently we have a project that is ongoing as we transition from analog, or basically plastic chest x-rays, to the digital arena, which is much more common in today's healthcare field.

Q So are you working with NIOSH in the transition to digital

x-rays as they relate to the B-reader program and the evaluation of pneumoconioses?

A The B-reader program, the evaluation of potential claimants, as well as the instructional process.

Q Do you do any work for the Virginia Worker's Compensation Commission?

A Yes.

Q What do you do?

A We evaluate radiographs of individuals who bring claims to the Commission.

Q And is the work that you do for the Commission itself?

A Yes, sir.

Q Are you retained by any plaintiffs or defendants in front of the Commission?

A No, sir.

Q Doctor, as part of your medical practice, do you have experience with asbestos-related diseases?

A Yes, I do.

MR. McMILLAN: If we could have the next slide, please, GG-2069.

Q Could you tell us a little bit about your experience with asbestos-related diseases?

A My practice is dedicated entirely to thoracic imaging, or chest radiology, and, in the course of the 30-year experience that I've had, we encounter patients who had asbestos

exposure.
Q And I may not have asked you this previously. Do you have a certain specialty within the field of radiology?
A Just thoracic imaging, or chest radiology.
Q Do you have any educational duties or responsibilities that relate to asbestos-related diseases?
A Well, basically I'm an instructor or teacher to -- as a physician in the school of medicine to radiology residents and pulmonary fellows on all aspects of thoracic imaging, including asbestos-related disorders.
Q Have you ever published in peer reviewed literature relating to pneumoconiosis or the ILO Classification System?
A Yes.
Q What have you published?
A I was invited to write an article about five years ago on the role of the ILO system and its current application in this arena.

MR. McMILLAN: Your Honor, at this point I would tender Dr. Henry as an expert in thoracic radiology.

MR. BAILOR: No objection, Your Honor.

THE COURT: He may offer an expert opinion in the field of thoracic radiology.

MR. McMILLAN: Could we turn to GG-2070, please?
Q Dr. Henry, does the chest x-ray play an important role in thoracic radiology?

A The chest radiograph is a ubiquitous study and it's, for all intents and purposes, the currency of healthcare. It's a very commonly ordered examination, commonly performed.
Q Is that one of the techniques or pieces of medical evidence that you deal with on a daily basis?
A Yes, sir.
Q What role does the x-ray play in the diagnosis of asbestos-related disease?
A Certain entities which could afflict the lung itself, the lung tissue itself, or the pleural surfaces, as well as malignancies associated with asbestos could be depicted on a chest x-ray.
Q I want to talk to you briefly about the standards for reviewing and classifying x-rays.
MR. McMILLAN: If I could have the next slide, which is GG-2071?
Q Doctor, what is the International Labor Organization?
A The ILO, or the International Labor Organization, is an arm of the United Nations which promotes for many years, or has promoted for many years, health and safety in the workplace.
Q And has the ILO issued any guidelines on the classification of chest radiographs?
A Yes, sir.
Q Could you explain what they've issued to us?
A The ILO has produced written guidelines for probably four